

**METHOD AND APPARATUS TO MOVE AN ACCESSOR WITHIN A DATA
STORAGE AND RETRIEVAL SYSTEM**

Abstract Of The Disclosure

A method to move an accessor capable of accelerating at a_{MAX} . The method
5 calculates a first velocity profile where the accessor travels a distance in the minimum
time interval. That first velocity profile requires a first maximum acceleration change.
The method calculates a second velocity profile, where that second velocity profile
includes a second maximum acceleration change, where that second maximum
acceleration change is less than the first maximum acceleration change. The method
10 determines if the accessor reaches a_{MAX} using the second velocity profile. If the accessor
does not reach a_{MAX} using the second velocity profile, then the method moves the
accessor using the first velocity profile. Alternatively, if the accessor does reach a_{MAX}
using the second velocity profile, then the method moves the accessor using the second
velocity profile.